National Geographic Society's *Sustainable Seas Expeditions* Photography Basics

The information complied here is intended to provide a very brief introduction to making photographs and video images with DEEPWORKER 2000. For information on photography equipment please refer to the photography equipment handout.

Making Video images

Zooming

Generally when you are shooting with any type of video camera you want to minimize zooming in and out and leave your camera set on a certain focal length for most of your shooting.

When you do zoom in on an object, such as a fish, zoom in using a slow deliberate motion. Don't zoom in and out in rapid motions. When you do zoom in, stick with that shot for a least 20 seconds. By doing this you, will help to generate a fluid transition and help with editing in the future.

When you are shooting think about the shot the way you like to watch TV or a movie. Always allow a shot to develop and end. Try not to move on to another subject matter until you have at least 10 -15 seconds of footage.

Example

Let's say you see a fish you want to film—aim the sub or video camera at the fish and begin filming. Follow the fish as long as you like or can, but allow the fish to swim out of frame before you move on to the next subject.

Framing

Developing a good eye for composition takes time and practice, but there are a couple of good rules to keep mind as you shoot. First, always consider framing your subject in other parts of the viewfinder, rather than just center - this is called the rule of thirds.

A good illustration of this would be a sunset. When you're shooting a sunset, you should position the camera so that you can enjoy as much of the sunlit sky as possible. If you were just to center the sun in the middle of the frame you might obstruct a beautiful cloud, or part of the sky that makes the shot more interesting. Always think about breaking your scene up into thirds and find the best place to start your shot.

Other Helpful Hints

- Fill the frame – eliminate dead space. This is a good place to use the zoom!
- Frame your subject matter in an interesting way – think about different angles
- Think about foreground – a sea fan or other object can add interest
- Leave your camera on – videotapes are cheap, sub dives are not
- Try to move the sub in a slow deliberate way

Video Tape Processing

A fresh 90 minute DV (digital video) tape will be placed in the sub recorder before each dive. After your dive a master copy will be made be Kip Evans or other trained personnel on the ship. It is your responsibility to review your tape after the copy is completed and create a detailed description of the things you observed using the corresponding time code.

Making Photographs

In general making good photographs is harder than shooting video. With stills, you need to concentrate on framing a shot and then you press the trigger capturing a moment in time. With video you just turn on the camera and let it go. Your moment in time is now as long as you want to run the camera.

The key to good photography and video is:

- Interesting subject matter
- Adequate Lighting
- Film type, aperture, shutter speed and film speed
- Framing of subject – Use the rule of thirds
- Subject behavior (is it interesting or beautiful)

Underwater Photography

The hardest part about taking photographs underwater is diving. You need to be a good diver before you can be a good underwater photographer. Many great photographers go underwater and spend their whole dives just trying to control their buoyancy. The same is true for *DeepWorker*. You need to get yourself set – meaning NO MOVEMENT to take a photograph that is not blurry.

The still cameras on *DeepWorker* are manually set for focus and aperture. Before your dive, Kip Evans, or one of the Nuytco technicians will set the aperture, distance scale and load the film in the camera. The camera's shutter speed is fixed at 1/100 sec.

Your only responsibility will be to shoot the roll of film provided. It's a good idea to shoot the entire roll, since we do not want to send the next pilot down without a full roll of film, but save a couple of frames for your trip back up to the surface.

Make sure that all camera systems are on and functioning properly before your dive.

To aim the Benthos camera, you will use a small video screen that gives virtually the same view as the 35mm camera. Remember that your subject needs to be in the field of illumination to be recorded on film.

Remember that you want to fill the frame as much as possible. Since there is a 15mm lens mounted on the camera, you will need to get very close to your subject (3-4 feet) unless your are shooting a landscape.

Film

Since there is virtually no light past 150 feet, we will be using faster films that will give us a little bit of latitude during commercial processing. For the most part, we will be using print films in the range of 400 to 1600 ASA. There may be a few instances where we use slide film, but these will be a case by case basis.

Processing

Each week we will make between 2-3 processing runs. For each roll of film shot, we will have two sets of prints made (one for the pilot) and one for SSE. In addition, we will also have a CD-ROM produced and possibly slides can be produced for a few select images.

Lighting

Video and still lighting will be provided by (2) 100 Watt HIDs. In addition, there will be (2) high-powered strobes available if extra range and subject freezing is necessary. Please refer to the equipment handout for more information.

For any other questions regarding SSE photography please contact:

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